USU researchers working to improve screening standards for PTSD

Diagnosing posttraumatic stress disorder is difficult. Servicemembers don't always report their symptoms or make the proper connections between emotional trauma and the body's response to extreme stress, especially since negative physical reactions often times occur weeks, months or even years later.

In these unreported cases, clinicians have little recourse, because there are no effective laboratory tests for identifying PTSD. But, Army Colonel David Benedek, M.D., and Lei Zhang, M.D., researchers at USU's Center for the Study of Traumatic Stress, are working to improve screening standards by identifying potential biomarkers for PTSD in the Traumatic Stress and Biomarkers in a Military Population Study.

Their research is already yielding promising results. Benedek, Zhang and their CSTS co-investigators found a measurable difference in p11 mRNA protein levels between soldiers reporting PTSD symptoms and blood samples from patients with other disorders– a distinction that could lead to a major breakthrough in diagnostic assessment.

"If biomarkers are identified, physicians will be able to definitively diagnose PTSD through blood and saliva samples, instead of using more ambiguous symptom checklists and patient self-reports," he said. "Furthermore, biomarkers will help us detect the PTSD earlier so treatment can begin sooner and troops may begin to heal faster."

Improved diagnostics and therapies for PTSD is one of military medicine's biggest, most pressing goals right now. The debilitating anxiety disorder affects thousands of people each year, and susceptibility increases for people with combat experience –exactly the population Benedek is evaluating at Ft. Bragg, a major deployment hub in North Carolina.

"Military members willingly go into harm's way to protect our country, so it's our job as uniformed medical professional to find better, more innovative ways to help them feel better when they return home emotionally or physically injured," he said.

Part of this effort includes identifying biomarkers for resilience. Trauma effects people differently, even servicemembers in the same platoon who share similar frontline experiences.

"Some people develop PTSD, others don't. Understanding both sides of the paradox is an important part of our research," Benedek said. "If we know what keeps some people healthy, perhaps then, we can prevent the PTSD from occurring in the first place."